MEDICAL PROCEEDINGS

MEDIESE BYDRAES

A South African Journal for the Advancement of Medical Science

'n Suid-Afrikaanse Tydskrif vir die Bevordering van die Geneeskunde

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REDAKSIONEEL · EDITORIAL

DIE PROFESSIONELE VOORSIENINGS-VERENIGING VAN SUID-AFRIKA

Die onlangs gepubliseerde Jaarverslag en Balansstaat van die Vereniging bring aan die lig dat die afgelope jaar weer eens deur voortreflike ontwikkeling en vooruitgang gekenmerk was. Die inkomste het aanmerklik gestyg en het op £112,364 te staan gekom. Die uitgawes was £11,635 ten opsigte van siektebetalingsvoordele, en £6,489 vir administrasie-uitgawes. Die genoemde bedrae was onderskeidelik 10.35% en 5.77% van die inkomste.

Die rente-toewysings aan lede se opgelope balanse was teen die koers van 5.816% wat die gemiddelde rentekoers op die Vereniging se beleggings gedurende die jaar was. Nadat voorsiening gemaak is vir siektebetalingseise, administrasie-uitgawes en rentetoewysings, het die beskikbare bedrag vir distribusie onder lede op £79,718 te staan gekom, en hul toewysingsrekenings is gevolglik gekrediteer teen die koers van 2s. 6.2d. per aandeel per maand.

Gedurende die jaar het die bates met £106,094 toegeneem, en staan tans op £373,229. Teen die huidige onwikkelingstempo word daar verwag dat hierdie bates teen die einde van 1959 meer as £500,000 sal wees; 56.6% daarvan is in doodveilige effekte belê, en die balans in eerste-verband-obligasies, eerste verbande, inskrywingsaandele en lenings aan lede.

'n Rekord-getal van 370 nuwe lede het gedurende die jaar aangesluit, en teen die einde van die jaar het die Vereniging se ledetal op 1,436 gestaan. Van hulle is 772 geneeshere en 356 tandartse.

THE PROFESSIONAL PROVIDENT SOCIETY OF SOUTH AFRICA

The recently issued Annual Report and Balance Sheet of the Society reflects another year of outstanding development and progress. There was a marked rise in the income, which reached £112,364. The expenditure amounted to £11,635 for sick pay benefits and £6,489 for administration expenses, these being 10.35% and 5.77% respectively of the income.

The interest allocations to members' accrued balances were at the rate of 5.816%, which was the average rate of interest earned on the Society's investments during the year. After providing for sick pay claims, administration expenses and interest allocations, the amount available for distribution to members totalled £79,718, and was credited to their apportionment accounts at the rate of 2s. 6.2d. per share per month.

The assets at £373,229 increased by £106,094 during the year, and at the present rate of growth should be over £500,000 by the end of 1959; 56.6% of these assets were invested in gilt-edged securities and the balance in first mortgage debentures, first mortgages, subscription shares and loans to members.

New members admitted during the year reached the record figure of 370, bringing the Society's membership at the end of the year to 1,436. Of these, 772 were medical and 356 dental practitioners.

The strength and the stability of the Society is now such that it is able to extend further the benefits provided. It is able to offer the sick-

Die Vereniging is tans so sterk en stabiel dat hy in staat is om die voordele wat aangebied word, verder uit te brei. Die Vereniging bied tans siektedekking aan lede onderwyl hulle tydelik buite die operasiesfeer van die Vereniging verkeer. Alle beperking op eise voortspruitende uit ongelukke is opgehef, en die aftree-ouderdom van lede is van 63 tot 65 jaar verhoog. Die Groep-lewensversekeringen hospitalisasieskema wat teen die einde van 1958 ingestel is, is reeds met bemoedigende welslae bekroon. Ongeveer 70% van die lede het besluit om gebruik te maak van die addisionele voordele wat aangebied word, en die globale dekking kragtens hierdie groepskema staan tans op amper £4,500,000. Terwyl slegs een eis van £5,000 kragtens die versekeringskema ontstaan het, het lede reeds aansienlike voordele kragtens die hospitaalisasieskema ontvang.

Die Raad stel op die oomblik ondersoek in na 'n volledige mediese versekeringskema, en behoort binne 'n paar maande in staat te wees om hierdie soort voordele aan te bied. Die Vereniging het alle moontlike stappe gedoen om inkomstebelastingsrabatte te verkry vir selfgeëmplojeerde persone ten opsigte van bydraes tot pensioenfondse, en daar word gehoop dat die Regering sodanige toegewings in die naaste toekoms sal doen. 'n Behoorlike pensioenskema sal van stapel gestuur word so gou moontlik nadat die Inkomstebelastingswet dienooreenkomstig gewysig is.

Met sulke voortreflike prestasies reeds op sy kerfstok kan die Vereniging die toekoms met groot vertroue tegemoetgaan. Dit bied sy lede en hul afhanklikes 'n mate van beskerming wat professionele persone nie tevore geniet het nie. Van die allergrootste belang is die feit dat hierdie organisasie deur die professies vir hul eie voordeel bestuur word, en dat die belange van lede te alle tye die swaarste weeg. Die Vereniging se toenemende sterkte verseker dat hy in staat sal wees om die omvattende beskerming wat reeds aangebied word, nog verder uit te brei, en dat hy kan voortgaan om 'n daadwerklike bydrae tot die veiligheid en stabiliteit van die professies te doen op 'n tydstip wat deur spanning en onsekerheid gekenmerk word.

ness cover to members whilst temporarily outside the area of operations. It has removed all restrictions on claims arising from accidents and is extending the retirement age for members from 63 to 65. The new Group Life Assurance and Hospitalization schemes introduced towards the end of 1958 met with a most encouraging response. About 70% have availed themselves of these additional benefits, the aggregate cover under the group scheme being nearly £4,500,000. Whilst only one claim of £5,000 has arisen under the Assurance scheme, members have already received substantial benefits under the Hospitalization scheme.

The Board is at present investigating a full medical insurance scheme and should be in a position to offer such benefits within a few months. The Society has taken every possible step towards securing income tax concessions for self-employed persons on contributions made for pension purposes, and is hopeful that the Government will grant these concessions in the near future. A proper Pension Scheme will be launched as soon as possible after the Income Tax Act has been amended accordingly.

With its splendid record of achievement, the Society may well look to the future with every confidence. It offers its members and their dependants a measure of protection not previously enjoyed by professional persons. Of paramount importance is the fact that this organization is run by the professions for their own benefit, with the interests of the members its first consideration. Its growing strength ensures that it will be able to add yet further to the comprehensive protection already offered and that it will continue to contribute greatly to the security and stability of the professions in this time of stress and uncertainty.

ANNOTATION

THE PROPERTIES OF ERYTHROMYCIN AND ITS DERIVATIVES

In an article entitled *The Value of Erythromycin* by Dr. J. Buch, which appeared in this *Journal* on 21 March 1959 at p. 135, the author makes a statement that the action of erythromycin stearate is identical with that of erythromycin propionate, both being more completely and more rapidly absorbed than erythromycin base, and that there is no significant difference in the blood levels attained by the stearate as compared with the propionic acid derivative.

Our attention has been drawn to several references in the literature which controvert this claim:

1. Josselyn, Endicott and Sylvester reported in *Antibiotics Annual* 1954–1955, Medical Encyclopedia, Inc., New York, N.Y., pp. 281–82 as follows:

'Various formulations prepared from erythromycin base or erythromycin stearate in the form of tablets or of an aqueous suspension gave comparable blood levels.'

2. Griffith, Stephens, Wolfe, Boniece and Lee in *Antibiotic Medicine and Clinical Therapy*, 1958, **5**, pp. 609–613, concluded:

'Blood levels following single 250 mg. doses of propionyl erythromycin in capsules,

erythromycin base in capsules and erythromycin base in tablets protected by an acid-resistant coating indicate that the propionyl ester produces an earlier onset of therapeutic concentration with higher and more persistent blood levels than either of the other two preparations.'

3. Perry, Hall and Kirby, in *Antibiotic Annual* 1959, pp. 375–81, report that:

'In 13 triple crossover studies, erythromycin propionate in capsules produced earlier, higher, and more prolonged serum levels than erythromycin base in capsules or in specially coated tablets. In addition, the propionyl ester was more uniformly absorbed and produced a more predictable response than the other forms.'

These facts are brought to the attention of our readers in the interests of making available as much scientific information as possible for the correct evaluation of this problem.

PSYCHIATRIC INDICATIONS FOR THERAPEUTIC ABORTION*

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Medical thought on the subject of psychiatric indications for therapeutic abortion has for too long been trammelled by the restraints imposed by the law on this procedure. According to the law, therapeutic abortion could only be undertaken to save a mother's life or, by untested extension, to prevent serious injury to her health, with the result that medical thinking has viewed the procedure from the standpoint of the legal requirements involved and has regarded all other considerations as irrelevant and unworthy. It is not surprising, therefore, that the medical view on therapeutic abortion is generally expressed in prohibitive terms. Cheney,[1] basing his attitude on a review of the literature and his personal experience, concluded that there was no absolute indication for abortion in any individual psychiatric or neurological disorder. A pregnancy may proceed normally in the presence of any such disorder and abortion does not necessarily prevent a recurrence of a mental attack or halt it. Let us, however, for a moment disregard legal considerations and take stock of the situation as it confronts the medical practitioner in the course of his daily work. Women who come to him or are brought to him with a request for the termination of pregnancy can be classified into the following groups:

1. Those seeking termination of legitimate pregnancies;
2. Those seeking termination of illegitimate pregnancies; and
3. Those who are or have been suffering from psychoneurosis or psychosis and who are considered unfit by the doctor or the relatives to continue with their pregnancies.

Group 1. Patients in this group resemble those in group 3, with the difference that in the former the psychoneurosis is precipitated by the pregnancy and expresses itself essentially as an uncompromising rejection of the pregnancy. The opposition to the pregnancy may be so profound that it becomes an overwhelming obsession with the patient. She can think of little else but that she is pregnant, that the pregnancy is abhorrent and that she must get rid of it. There is, as can be imagined, a tremendous aggression inspiring and sustaining the hostility to the pregnancy, and this aggression will, most certainly, lead her to attempts to seek or procure an abortion, regardless of her own health and safety, and in failure it may provoke suicidal attempts.

But the unborn child is not the only one to be hated and attacked. The husband is tormented for his responsibility in making her pregnant and for his freedom, as she sees it, from the effects of the pregnancy; and the medical attendant is pestered to rescue her from the undesired pregnancy. This attitude is also reflected in the intolerance and magnification, conscious and unconscious, of the symptoms that normally accompany pregnancy, such as morning nausea and vomiting and the bodily discomforts that are evoked by the expanding uterus. Protracted and persistent hyperemesis gravidarum probably has, as one of its roots,

* A Paper read at a symposium on *The Psychiatric and Medico-Legal Aspects of Therapeutic Abortions,* conducted by the Southern Transvaal Sub-Groups of Neurologists, Psychiatrists and Neuro-Surgeons and Gynaecologists and Obstetricians on 8 October 1958. Mr. M. A. Millner, B.A., LL.B., B.C.L., of the Department of Law, University of the Witwatersrand, presented the legal aspects.

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an antagonism to the pregnancy, to which the patient may not admit and of which she may not be fully conscious. This may, through insufficient food intake and metabolic disturbance, exhaust the patient and threaten her life and she may achieve her goal of getting rid of the unwanted pregnancy by, unconsciously, staking her life.

The psychosomatic expression of the underlying hostility to the pregnancy and everybody associated with it may, however, not proceed to such serious lengths. It may produce a state of tension, irritability and anxiety, with accompanying psychosomatic symptoms such as insomnia, anorexia, fatigue, sweating, palpitations, hyperventilation; and these, in turn, may advance to produce a condition of agitation and depression with psychotic features such as suicidal rumination and suicidal attempts, formation of delusions and the appearance of hallucinations.

The development of an acute psychoneurotic state or of a psychosis is unlikely to occur in patients who are not predisposed to these conditions. They may or may not have had previous psychoneurotic or psychotic episodes, but their personalities have been characterized by drives and tendencies which are likely to make them resist and resent pregnancy. There is present, on the one hand, an intense narcissism, which sets an unequalled value on the person, personality and possessions of the woman, expressed in an unbounded egotism and egocentricity, and, on the other, an aggressive-sadistic disposition, which is the more readily aroused into action by the low threshold to challenge and frustration established by the narcissistic ego.

What are the circumstances which move this type of personality to the reaction described above? They all represent threats to the narcissistic ego and the more primitive the level of the ego at which the threat is directed the more vigorous is the reaction likely to be. The woman may protest that the pregnancy is inconvenient; that she had already bought her summer wardrobe; that she and her husband were planning to go overseas; that an addition to the family would upset the routine of the home or strain its resources or accommodation; or she may find the disfigurement of pregnancy so revolting as to be unthinkable and unacceptable. Or she may argue that a child will change her relationship with her husband; that it is too precious to her to consider such a step; or she may fear that her health will be deleteriously affected by the pregnancy, or that the child will not be born normal.

The fear for her and the child's health may not be entirely neurotic, for there may be a history of emotional instability or disturbance, or of some hereditary physical condition on her or her husband's side, or the pregnant woman may have had an infectious disease, such as German measles, in the first period of her pregnancy, when it is very likely to induce a congenital defect in the baby. I recently had to deal with a woman who, a month before conception, had had a pyrexia of unknown origin which had been variously diagnosed. She made up her mind that the child would be born a cripple and over weeks worked herself up to the point of suicidal protest and despair in her clamour to have the pregnancy removed. Or the woman may not want a rival to the precious child she already has, demanding a share of love, attention and resources.

As can be imagined, there is not infrequently a history of marital discord or rupture, or a threat of it, associated with the clinical situation under discussion, and inflaming it. Financial difficulties or economic and political uncertainty may assist to incite the woman into intransigent opposition to the pregnancy. It is not uncommon for the opposition to the pregnancy to come from the husband. He may fear the responsibility of fatherhood or the encroachments a child may make on one or other cherished feature of his personal or domestic life; but when the opposition becomes frenzied, as it may do, it is more likely to stem from deep-seated characterological deficiencies. The impact of such an attitude on the pregnant mate is likely to be profound. The insecurity, resentment and conflict it sets up in the woman may provoke distressful anxiety symptoms and a serious depressive state.

From the strictly legal standpoint, the medical man cannot help this woman in her predicament, even where there is a real danger of foetal defect and transmission of disease. But is not this the point at which the medical man, if he could forget the challenge and threat of the law, would find the courage, in the interests of preventing ill health, disease, deformity, suffering and misery, to terminate pregnancy, especially in view of the woman's clamour for this step? And what if there is no such ground for terminating pregnancy, how are we to view the plea that is based on the self-centredness of the woman, not that she is conscious of this implication to her personality make-up of the grounds of her demand for termination. Again,

forgetting the law, the criterion by which the unfettered medical man is surely going to decide his attitude is by assessing what sort of mother the woman is going to be, for if she is incapable of giving love and devoted attention to her offspring, and more, if she rejects the new-born child as she did the pregnancy, what can be the outcome, as far as the child is concerned, but a mal-development of the personality. And if it is our duty to prevent physical ill health, is it any less our duty to prevent psychical deformities and distress? Let me say at once that the woman who is opposed to her pregnancy does not necessarily make a bad mother. Most women become more accepting as the pregnancy advances and love the baby when it arrives. But clearly the more self-centred the woman is, the less room there will be for the child in its immediate needs and its continuous need for ego-development and independence. The newspapers recently carried stories of a married woman who did not want her pregnancy, did not want to see the child when it was born and made arrangements for its immediate adoption after birth. When the adopted mother perished in an aeroplane crash and the child, though burned, survived, the mother (after an interval) asked for the child to be returned to her. It way well be that this mother's conscience may have been stirred sufficiently by the tragic happenings to her rejected infant to overcome her inner hatreds and resentments, but what a loading against happiness and normality was launched with the birth of the child! Have we been just to the child? And was not the mother sick of mind in her attitude and deserving of help? I am only too conscious that we are in the presence of life, though yet unborn and that it is ever sacred, and that our capacity to judge a human being and to predict the course of human development is woefully limited, but is a narrow principle of law the best criterion by which the issue is to be decided? Cannot more be left to the conscience of the medical man and the needs of the pregnant woman as she perceives them? Is it so immoral to question our right to make a woman have a child she does not want? Admitting that many a mother is afterwards thankful that her demand for the termination of her pregnancy was successfully opposed by her medical attendant, cannot a doctor be permitted to judge, in the interests of both the mother and the child to be born, when to stand firm against a woman's desire for termination and when to accede to it?

I have referred to the narrow principle of the law. I do not wish to convey an impression of irreverence towards the law. I am very conscious that it carries the sanction of centuries of human experience and understanding and, in the matter under discussion, also the support of the Church. What my comments are intended to achieve is a review of our attitudes, with due regard to the majesty of the law but with no less regard to the sanctity of the mother's individuality and the welfare of a future generation. I imagine we are still a very long way from winning greater freedom of action in the matter, and the discussion of safeguards, at this stage of evolution of public opinion, would be unrealistic. I realize only to well that the grant of greater freedom of action to the medical man would have to be linked with necessary safeguards.

There is a consideration which is often overlooked by those who would facilitate termination of the unwanted pregnancy we are contemplating, and that is that after the woman has succeeded in her quest for termination she may suffer an upsurge of regret and guilt which may bring on an intense depression and be followed by profound personality changes. The more untiring and persistent the woman has been in achieving her end, the more likely is it that her aggressive and obsessive disposition may be turned in accusation and punishment of herself. No legal deterrent to greater freedom of action could be devised that holds more terror than this possible consequence of a termination.

Group 2. The second group, viz. the single or married woman seeking termination of an illegitimate pregnancy, constitutes perhaps the largest group that is presented to the psychiatrist for opinion. The woman has been unable to face up to the fact of her pregnancy, hides it as long as she can from her family, friends and not uncommonly even her lover and reaches a stage where she finds herself compelled either to seek help or to contemplate suicide. Some find it easier than others, in this predicament, to turn to a doctor for advice and help. There are the barriers of shame, the difficulty of confiding in a stranger, even if a doctor, and last but not least, the lack of finance. But having confided the dread secret to some one, not even necessarily a doctor, the individual has more than half-retreated from the possibility of suicide. I imagine more have committed suicide with the secret untold than with help refused. As often as not there is an unconvincing history of depression and the contemplation of suicide. There are symptoms of anxiety, but they have not, as a rule, rendered the person sick and

unable to continue at work; and one is faced, not by a fully developed clinical condition of depression but by a threat of suicide. It calls for experience and acumen to assess the earnestness of the threat. Sometimes the person appears so disingenuous that acceptance of the story of suicidal rumination is more or less automatic; at other times one has an uncomfortable feeling that it is manufactured to gain one's help.

Adhering to the law, as one must, experience supports a courageous stand against the help sought for a recommendation to terminate, for, whether the suicidal thoughts were genuine or not, it is surprising how seldom they issue into action. Certainly nothing in psychiatric states clears up more quickly than a suicidal frame of mind, with termination of the pregnancy. Nevertheless, tragedies of suicide do occur in these circumstances and one cannot exclude this fact from one's mind. In addition, it is impossible not to feel a sympathy for the woman in her plight and despair. Here again I say, we save a life as yet unborn but with what a burden of outcastness, future hostility to the parents and bitterness and rebellion towards society. And the mother is left to endure her shame, isolation and perhaps guilt, during her pregnancy and after. Is it not time that we adopted a more realistic and humane approach to the woman with an illegitimate pregnancy?

Group 3. In the third group, viz. the psychiatrically ill pregnant woman, the medical man is faced by a problem which is the opposite of that presented by the other two categories. He has to decide, not for or against termination, but for or against continuation of the pregnancy. The sick woman is not seeking termination, but her psychiatric condition poses the problem to the medical attendant. The questions that arise in this context are:

(*a*) What part has the pregnancy played in precipitating the psychiatric condition?

(*b*) What influence does the pregnancy exercise on the course of the condition and the stability of the individual?

(*c*) What influence can the termination of the pregnancy have on the course of the condition?

With these questions in mind I shall bring into quick review the main psychiatric and neurological conditions that are met with in association with pregnancy.

1. *Psychosis.* The incidence of psychosis in pregnant women is no higher than in a control group of the same age;[2] and when one takes into consideration all the stresses that arise in childbirth it is not a little surprising that the incidence of puerperal psychosis is not higher than it is. One figure quoted by Mayer-Gross, Slater and Roth for puerperal psychosis is 0.14% in about 20,000 births.[2] It is however a striking fact that puerperal psychosis constitutes about 5% of female admissions to mental hospitals.[2]

Less than a fifth of the psychoses associated with childbirth start during pregnancy. The rest start in the puerperium, though it is more than possible that an earlier commencement in pregnancy may have passed unobserved. Conditions arising in the later period of pregnancy (e.g. toxaemia, hypertension, eclampsia) may produce a delirious or convulsive state or, in the absence of any of the above clinical entities resulting from the pregnancy, the gravid woman may develop a chorea, which, in the severe form, may be associated with a confusional state; or she may manifest psychotic features, essentially confusional, which, in time crystallize into a picture that is frankly schizophrenic, as a rule, and less commonly depressive.

Labour and the puerperium inflict additional stress on the woman and either aggravate a pre-existing psychosis or precipitate one. Most cases, in my experience, have only an incidental connexion with the events of childbirth; that is to say, there is either a strong constitutional predisposition to psychotic breakdown or the individual has been subjected to strong emotional pressures and conflicts that inevitably come to focus on husband and home, and the stresses of childbirth coming on top of them precipitate a psychotic breakdown.

In the presence of predisposition and a history of stress preceding the pregnancy, there is naturally likely to be more than ordinary concern about the possible effects of the stresses of childbirth. Their importance can be overstressed, for a woman may break down in one pregnancy and not in a subsequent one. Nevertheless, the risk is there and cannot be overlooked; and each schizophrenic attack tends to hasten the deterioration of the personality.

Should termination of pregnancy in the presence of a psychotic reaction be advised or not? I would say not, in the absence of any special circumstances. For one thing, many such reactions clear spontaneously; for another, termination does not influence the progress or outcome of the psychotic condition and, last but not least, electro-convulsive treatment is

available to counter a depressive state and the threat of suicide. Termination may be considered in order to prevent a puerperal psychosis, and a decision would rest on a number of factors, such as the age of the woman, her previous mental history, the number of children she has, her and her husband's wishes in the matter, etc. In considering termination, in the presence or possible development of a psychosis, it must not be overlooked that it can be more traumatic than the stresses of childbirth.

2. *Psychoneurosis.* Most women show temperamental changes during pregnancy—irritability, greater egocentricity, transitory aversions to the husband and others, longing for foods she ordinarily has little interest in, moodiness and touchiness, anxiety about the pregnancy and health of the child to be born. Anxiety is likely to be more pronounced with the first than with subsequent pregnancies. More often than not, however, pregnancy relieves pre-existing psychoneurotic symptoms and has a euphoriant influence. This contrasts with the picture presented by the gravid woman with the mono-symptomatic psychoneurosis of the first category, described earlier. It is inconceivable that a psychoneurosis *per se* provides grounds for termination.

3. *Chorea.* The occurrence of chorea in pregnancy, mostly in the third to the fifth month, is commonly associated with a history of chorea or rheumatism earlier in life. It may result in premature labour or abortion, but usually not. It usually clears with termination of pregnancy. In the few cases in which the severity of the chorea interferes with feeding and sleep, there may be such deterioration of the physical and mental condition of the woman that the pregnancy may have to be terminated, for the maternal mortality is high and the foetal mortality higher, if the pregnancy is allowed to continue.

4. *Epilepsy.* Pregnancy may increase or decrease the occurrence of fits in epilepsy but, as a rule, it effects little change in the condition. It may uncommonly precipitate it. Anti-convulsant medication should be continued without interruption through pregnancy. Termination may become necessary in status epilepticus if it produces serious changes in the physical and mental condition of the woman.

5. *Disseminated Sclerosis.* Pregnancy is believed to aggravate the condition, but that is not, ordinarily, considered a ground for termination.

In summary, I would say that where the law is permissive, in protection of the woman's health and life, the clinical situation seldom justifies termination; and, conversely, where for psychological and biological reasons, the medical man might wish to consider termination, the law makes it a crime. No one would want to give licence to promiscuity or encouragement to illegitimacy; but few can be comfortable about insisting on bringing a life into the world that is wanted neither by mother nor father, nor for that matter, society. The net result of this ambivalence is that action is allowed to rest on a gamble as to whether the threat of suicide will materialize or not, and the law is allowed to remain inchoate.

Postscript: The impression I gleaned from the discussion at the symposium was that the gynaecologists are reluctant to do a therapeutic abortion for a variety of reasons (sanctity of life, danger of sterility, psychological effects), but that they would do it if a psychiatrist recommended it. That they should pass the responsibility of a decision to the psychiatrist is understandable, but I did not sense an acute awareness on their part of his difficulty *vis-à-vis* the law as it stands at present. Most were agreed that the threat of suicide is usually not to be taken too seriously, but it is precisely the woman, illegitimately pregnant and threatening suicide, who is mostly referred to the psychiatrist. If he recommends termination, he is in conflict with the law; but if he does not, psychiatrist and gynaecologist are at peace with the law, but are they at peace with their social sense and humane impulses? The gynaecologist can appease his conscience or hope for a defence in law by leaving the decision to the psychiatrist! And the psychiatrist?

Mr. Millner declared that there was no statutory law in South Africa dealing with therapeutic abortion and took the view that the law as it stands is unrealistic. He felt that public opinion should be stirred to prepare the way for legislation and that the medical profession should take the lead in this regard.

The meeting was clearly divided in its views, for there was no strong support for a resolution to change the present position or for the appointment of a medical board to make decisions in the type of case under discussion.

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SURGERY OF THE GALLBLADDER

WITH REFERENCE TO THE CYSTIC DUCT SYNDROME*

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This is a review of 150 personal cases of biliary disease treated surgically. The cases are proven in that they have been operated on and have been followed up for a minimum of one year. The series is taken from May 1954 to July 1957.

Operations were only performed in those cases of cholelithiasis or in cases of acute cholecystitis which had not subsided. Non-calculous cholecystitis was treated conservatively, and with the exception of one case, medically.

The age distribution of the cases varied from 19 to 84 years (Fig 1). There were 36 males and 114 females, a ratio of 1 to 3.

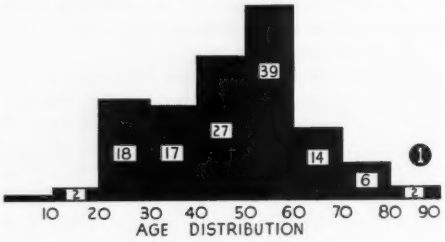

Fig. 1. Age distribution.

The following surgery was undertaken:

Cholecystectomy	130 cases
Cholecystectomy and exploration of the common bile duct	21 cases
Cholecystostomy	2 cases
Exploration of the common bile duct	1 case
Removal of cystic duct remnants ...	4 cases

There was one death in this series.

The patient, a male aged 73 years, had acute abdominal pain persisting for 3 days. Pain was increasing and a laparotomy was performed. A small, shrivelled gall bladder, acutely inflamed and packed with small gall stones, was found. Owing to the gross distortion of the anatomy, dissection was commenced from the fundus downwards. The cystic artery was markedly sclerotic and broke every time a ligature was applied. Bleeding was stopped with difficulty. Blood loss in spite of manual pressure on the gastrohepatic pedicle was considerable, but was replaced by blood transfusion. He recovered from his operation, but on the 8th day developed a pulmonary embolus and a bundle branch block. Heparinization was commenced but the patient died the next day.

* Based on a paper presented to the Surgical Forum, University of the Witwatersrand.

TABLE 1: FINDINGS AT OPERATION

Diagnosis	*Number of Cases*
Cholelithiasis	119
Small shrivelled gall bladders ...	7
Acute cholecystitis	14
Empyema of the gall bladder	3
Mucocele of the gall bladder ...	7
Papilloma of the gall bladder ...	1
Chronic acalculous gall bladder ...	1
Cystic duct remnants	4

CHOLELITHIASIS

My belief is that there is no such condition as a 'silent gall stone' and that every gall stone found fortuitously should be removed, as sooner or later it will cause trouble. All these patients, if questioned, will give a history of dyspepsia. The majority of this group gave the classical history of flatulent dyspepsia, fat intolerance, biliary colic and, in some cases, jaundice. Liver function tests were done in a large number of cases. Liver function tests are of doubtful value, especially in ambulatory patients, but they may be useful if the patient gives a history of jaundice.

A Kocher's incision was used in all cases undergoing surgery. A general check of the abdomen was done and hiatus hernia was especially looked for. The 'T' junction was exposed and the anatomy of this region carefully examined. The most common anatomical abnormality found was the aberrant course of the right hepatic artery. (Fig. 2). It often ran behind the gall bladder. The other abnormality was the variation of the entry of the cystic duct into the common bile duct. The small shrivelled gall bladder (7 cases) usually opened directly into the common bile duct. In these it is better to open the common bile duct and put in a T-tube before dissecting off the small gall bladder.

All these cases, with few exceptions, were done from the 'T' junction upwards—the standard method. No attempt was made to re-peritonealize the gall bladder bed, because this may cause pocketing off if there is an aberrant cystic duct. All these gall bladder beds were drained with a Penrose or tube drain. An appendicectomy was performed in

every case that was not acute and where the appendix could be delivered without difficulty.

The following associated pathology was noted:

Hiatus hernia: 6 cases.
Hard nodular pancreatitis: 4 cases.
Duodenal ulcer: 2 cases.

In a large number of cases the pancreas was noted as firmer than normal.

Complications. These were:

Wound sepsis: 4 cases.
Subphrenic abscess: 1 case.

The subphrenic abscess occurred in a woman of 27 years with cholelithiasis. I feel that in this case the ligature on the cystic duct slipped and she developed a collection of bile which became septic. This was drained.

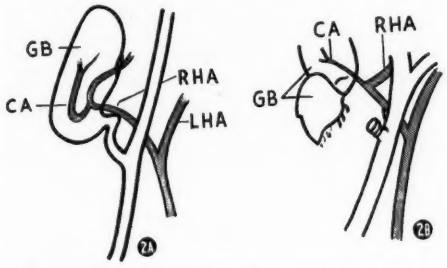

Fig. 2. Diagram to show the commonest anatomical abnormality that can occur, where the right hepatic artery runs behind the gall bladder and gives off the cystic artery.
GB: Gall bladder. RHA: Right hepatic artery.
CA: Cystic artery. LHA: Left hepatic artery.
Fig. 2B:
GB: Gall bladder (reflected upward).
CA: Cystic artery.
RHA: Right hepatic artery.

EXPLORATION OF THE COMMON BILE DUCT

This was done in 20 cases (14%). The indications were:

1. Dilated or thickened common bile duct.
2. Palpable stone.
3. Biliary mud.
4. Small stones in the gall bladder.
5. A previous history of jaundice.
6. A hard nodular pancreas.
7. Every case of a small contracted gall bladder.

The findings were as follows:

Stones in the common bile duct: 9 cases.
Biliary mud: 3 cases.
Dilated duct with a tight sphincter of Oddi: 2 cases.
Nodular pancreas: 1 case.
Dilated duct with no pathology demonstrated: 5 cases.

The common ducts in all 4 cases of cystic duct remnants were also explored and will be discussed later.

Most recorded series show that the positive incidence of stones varies from 30–60%, with an average of 50%. Cattell and Warren (of the Lahey Clinic) in a large series of cases found that exploration of the common bile duct at the time of cholecystectomy did not increase the mortality. They advise that the indications for choledochostomy be kept as broad as possible, to minimize the possibility of overlooking common duct stones. As will be seen from the data in this series, stones and biliary mud were found in 12 of 20 cases. In these 20 cases there were no deaths. I do not hesitate to explore the common duct and at the same time pass Bâkes dilators to dilate the papilla. A T-tube is left in every time a choledochostomy is performed.

RETAINED STONES IN THE COMMON BILE DUCT

In this series there were 2 cases of retained stones. One case was operated on in an acute attack and later found to have a retained stone in the common bile duct. The second case had a post-operative cholangiogram done and 2 small stones were seen. She refused further operative treatment but has had no further symptoms. In all probability she has passed these stones.

Retained stones occurred in 3–10% of cases. Smith *et al.*[5] make the interesting observation that if there is not an indication to open the common bile duct the incidence of retained stones is less than 1%. In those cases where the common duct is explored for the reasons given, the incidence is between 3–10%, and where a second re-exploration may have to be done, a recurrence of 25%. An operative cholangiogram will therefore mainly be of value in those cases where the common bile duct is going to be explored because of definite indications to do so.

ACUTE CHOLECYSTITIS

Up to the present we have treated the cases of acute cholecystitis conservatively. We have allowed the acute attack to subside and then have brought them back later for cholecystectomy. Many of these cases have had recurrent attacks in this period. However, in 14 cases of acute cholecystitis early operation was done. The indications were: increasing or persistent pain, persistent or increasing temperature or increasing symptoms.

If there is any doubt about the diagnosis, very valuable assistance can be obtained by an immediate intravenous cholangiogram.

Two young women both presented with signs and symptoms of acute cholecystitis. No previous history of dyspepsia was obtainable and the diagnosis

was rapidly established when the cholecystogram showed the cystic duct ending abruptly as it reached Hartman's pouch. In both these cases a gangrenous gall bladder with an impacted stone was found.

In the 14 cases of acute cholecystitis, 13 had cholecystectomies and 1 had a cholecystostomy. At operation 3 had perforated and 2 were frankly gangrenous. In one case there was a stone in the common bile duct and this was removed.

In a further case the gall bladder was removed and because the common duct was oedematous, it was not explored and was later found to have a retained common duct stone. All these cases were operated on in the first 4 days of the attack.

The basis for continued controversy between early and delayed operations for cholecystitis probably depends on the experience of the surgeon and the material he has to attend. Glenn and Wantz[3] advocate early surgery, but they emphasize the point with which we agree, viz. that early surgery was not necessarily emergency surgery. Cattell[1] does not believe that patients who have been admitted with acute cholecystitis should be discharged from hospital to return for cholecystectomy unless there is some decisive contra-indication to surgery during the initial admission. In view of this, and my own findings, I feel that a more radical approach is necessary in these cases. This is especially so in the more elderly patient, as Stohl and Diffenbaugh[6] found that the incidence of perforation was twice as common in this age group.

PAPILLOMATA OF THE GALL BLADDER

Wakely and Graves[7] recently reviewed the problem of papillomata. They stated that it occurred in 8 of 2,000 cholecystectomies and, although the symptoms were those of cholelithiasis, gall stones were present in only 3 cases. Removal of the gall bladder cures the symptoms. The X-ray picture in the cholecystogram is a negative shadow fixed in the same position. In the case in this series the patient's symptoms improved after cholecystectomy.

CYSTIC DUCT REMNANTS

The term post-cholecystectomy syndrome is an unfortunate one and many recent papers show that the symptoms that persist after a satisfactory cholecystectomy are due to some other pathology such as hiatus hernia, diverticulitis, etc. In this series 4 cases had post-operative symptoms. One had a hiatus hernia, one had a diverticulitis and the remaining 2 had symptoms for which I could find no cause. They did, however, settle down on medical management.

Another cause of recurrence of symptoms is an incomplete operation in which a remnant of the gall bladder or a long portion of the cystic duct has been left. Gray[4] and Glenn and Johnson[2] have both written excellent papers on this subject.

The main symptoms shown by patients with cystic duct remnants are:

1. Pain (82%) in the right upper quadrant and the epigastrium radiating to the shoulder.
2. Jaundice (55%).
3. Nausea and vomiting.
4. Fat intolerance.
5. Anorexia and weight loss.
6. Cholangitis.

There may be a long delay between the cholecystectomy and the appearance of symptoms. One of the 4 cases to be presented briefly had her cholecystectomy 20 years before the reappearance of symptoms. Symptoms associated with cystic duct remnants are not pathognomonic and it is only by exclusion and the intravenous cholangiogram that the diagnosis can be made. Womal and Crider[8] expressed the belief that symptoms are not due to the duct itself but to numerous nerve endings resulting in pain and malfunction of the sphincter of Oddi.

CASE HISTORIES

1. *Mrs. D., aged* 59. In 1949 this patient had a cholecystectomy for gall stones. The operation was done in America and she had a stormy post-operative period. She felt fit for the next 7 years, after which she began to have repeated attacks of cholangitis. These episodes consisted of rigors that lasted a day or two and occurred about once a month. The present attack had lasted 11 days and she had nausea, vomiting, rigors and loss of weight.

Biochemical Studies:

Alkaline phosphatase: 52.8 K.-A. units.
One-minute bilirubin: 0.9 mg. per 100 c.c.
Thymol flocculation, Thymol turbidity } Markedly increased.

She then developed pruritus. A cholangiogram showed good filling of the hepatic and common bile ducts and a failure to show up the radicles of the right hepatic duct.

It was postulated that there was a stone in the right hepatic duct. An operation was performed on 26 December 1956. The common duct was exposed and an operative cholangio-

gram was done. The first X-ray picture (Fig. 3) revealed the same hold up at the apex of the right hepatic duct that had been seen on the intravenous cholangiogram. However, manual compression was applied to the common bile duct and more dye introduced. This revealed a normal right ductal system. A large cystic duct remnant was noted (Fig. 4) and this was removed. Liver biopsy of the right lobe of the liver revealed a non-specific inflammatory process with biliary obstruction. The common duct was explored and this was essentially normal. She has had no further symptoms or attacks of cholangitis since her operation (Fig. 5, Mrs. D.).

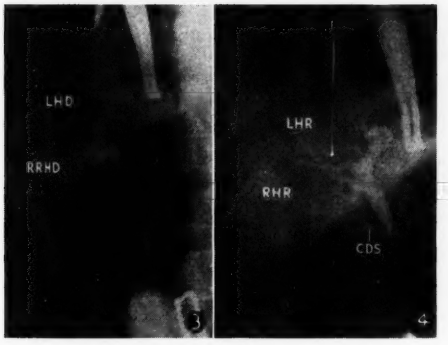

Fig. 3. Operative cholangiogram on Mrs. D. showing failure to fill the radicles of the right hepatic duct.
LHD: Left hepatic duct radicles.
RRHD: Region of right hepatic duct radicles.

Fig. 4. Mrs. D. The common bile duct has been compressed and further dye has been injected. The right hepatic tree has now been filled. Note the large cystic stump (demonstrated diagrammatically in Fig. 5).
LHD: Left hepatic duct radicles.
RHD: Right hepatic duct radicles (filled).
CDS: Cystic duct stump.

2. *Mrs. P., aged* 39. She was seen on 7 May 1955. She had had a cholecystectomy performed for multiple gall stones 2 years and 9 months before. The common duct was not explored. Since the operation she had not felt well and had suffered from flatulence and dyspepsia. She also had had fat intolerance and intermittent jaundice. An intravenous cholangiogram revealed a normal duct, but a cystic duct remnant measuring 1 × ½ inch was present. A catheter was introduced into the common bile duct and the remnant removed (Fig. 5, Mrs. P.).

She had an intra-peritoneal leak of bile from around the catheter and this caused a peritonitis. Her subsequent history was satisfactory.

3. *Mrs. G.* Fourteen years before she had had a cholecystectomy for cholelithiasis. Since then she had had recurrent jaundice, flatulent dyspepsia and biliary colic. A cholangiogram revealed a large cystic duct remnant containing stones (Fig. 5, Mrs. G.). At operation the common bile duct, which was dilated, was explored and revealed no pathology. A large cystic duct remnant containing stones was present and this was removed. Since her operation she has had no recurrence of symptoms.

4. *Mrs. L.* Twenty years before she had had a cholecystectomy for gall stones and was well until a year before being seen, when she

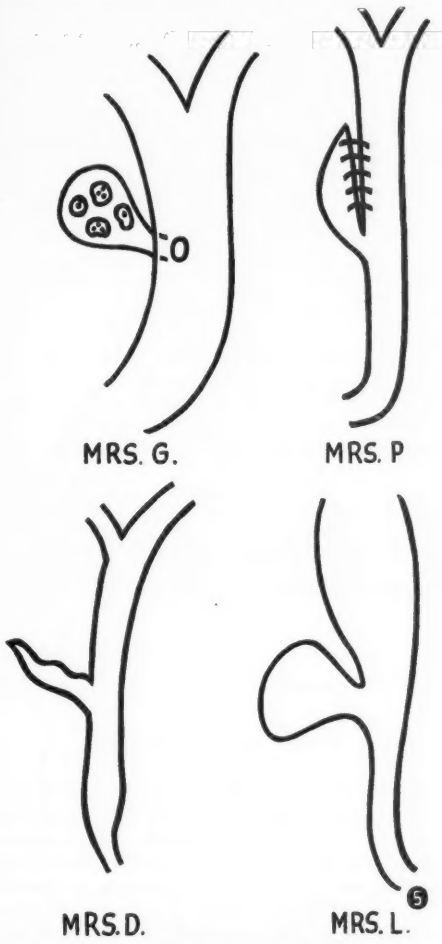

Fig. 5. Diagramatic findings in the 4 cases of cystic duct syndrome.

developed a marked flatulent dyspepsia and fat intolerance. When I saw her she had an attack of acute cholecystitis. This was treated conservatively and subsequently an intravenous cholangiogram was done. This revealed a slightly dilated duct and a moderate sized pouch (Fig. 5, Mrs. L.). Removal of this relieved the patient of her symptoms.

DISCUSSION

In all cases operated on for cystic duct remnants, the abdomen must be thoroughly explored to rule out any other pathology. The common bile duct must be opened and thoroughly explored. The sphincter of Oddi must be dilated with Bâkes dilators to make sure that there is no fibrosis and the texture of the pancreas must be carefully examined. Only when all these are found to be normal can a long cystic duct be blamed for the symptoms.

The syndrome of the long cystic duct can be avoided by ligaturing the cystic duct ¼ inch from the T-junction. One error that may occur is that the cystic duct may run parallel to or behind the common duct and in this way its true length is not recognized.

Cystic duct remnants may not only cause symptoms but they may be the site of inflammation or may cause stone formation; 29% of Glenn and Wantz' series[3] had cystic duct calculi. This incidence is too high to have been overlooked by the surgeon at the primary operation of cholecystectomy. A good result that follows after excision of a cystic duct stump speaks for itself.

SUMMARY

1. One hundred and fifty cases undergoing cholecystectomy are discussed.

2. A plea is made for early surgery in acute cholecystitis, especially in the elderly patient.

3. Indications for choledochostomy are stated.

4. The cystic duct syndrome is discussed.

OPSOMMING

1. 'n Honderd-en-vyftig gevalle van galblaasoopsnyding word bespreek.

2. 'n Pleidooi word gelewer vir vroeë chirurgie in gevalle van akute galblaasontsteking, veral as dit by bejaarde pasiënte voorkom.

3. Die indikasies vir choledochostomie word uiteengesit.

4. Die galblaasbuis-sindroom word bespreek.

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THE TRAINING OF THE MEDICAL STUDENT IN FAMILY AND COMMUNITY PROBLEMS

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SOME TRENDS IN SOCIETY

Society appears to be turning to Medicine as arbiter and adviser for an ever-increasing number of its problems. Examples which may be cited are those problems connected with population increase, with the growing proportion of the population which is senescent and kept from dying, but incapable of livelihood and, finally, with the ever-increasing radiation hazards of our atomic age.

'The Doctor—as the man made wise by constant facing of research-truth—is considered both as the one unshockable recipient of private and pressing confidence, and also as the only man who knows what to do—the one man who can keep the body out of pain, the mind in some sort of ease or indifference, life healthy, death postponed and the community uninfected. No wonder such a profession has come to be the most powerful and grows more so.'[1]

The Law, Education and the Church have each not been able to satisfy fully the complex needs of our society.

SOME TRENDS IN MEDICINE

Within Medicine itself certain significant trends are developing. These include the increasing scope of public health, and the expanding role of the clinical practitioner.

The health and medical problems of the total community, and of specific groups within it, are being studied by a variety of scientific disciplines. Their findings will need to be incorporated into comprehensive medical and health programmes. In his future role the public health practitioner is envisaged as the integrator of this multi-disciplinary approach to group and community health and medical problems.[2] His task is to prepare and present the facts needed for the solution of public health problems from the broad viewpoint of the adequacy of health services.

Chronic disease and handicapping conditions, including mental illness, have emerged as the major health problems of the present and the foreseeable future. This will involve a change in our interests and concern from the dangers of dying to the hazards of living. The attack on these major health problems will require close co-operation between public health and clinical practitioners. For the promotion of individual and community health a wide range of community resources must be available to the private practitioner for preventive, diagnostic, therapeutic and rehabilitative services. The practitioner must be ready to use these services for the benefit of his patients.

Improved individual and community health will also require that each individual take the steps necessary to improve and safeguard his health. This involves the formidable task of health education of the public, to which both public health and general practitioner can make important contributions.[3] It is pertinent in this regard to recall that 'doctor' meant a teacher to the Romans and that healing and teaching are the functions expected of practitioners.[4]

These trends (the growing importance of Medicine in society, the expanding scope of public health, and the clarification of the contribution of the general practitioner to family and community problems) are bound to be reflected in the demands made on a medical graduate. His training should equip him to participate and contribute effectively to family and community health and medical problems in whatever sphere he may function—public health, hospital or general practice.

This paper will refer to the common categories of family and community problems which occur in practice. The essential concepts, skills and experience which need to be acquired during medical training will be discussed. The kind of data on which is based a diagnosis of a family or community problem will be outlined and the skills required to elicit these data will be shown. Some common necessary procedures in the handling of these problems will be commented on. Finally, the introduction of the medical student to appropriate health and welfare personnel and organizations will be discussed.

SOME TRENDS IN MEDICAL EDUCATION

It is necessary to consider some important trends developing in medical education.

The First World Conference on Medical Education unambiguously reaffirmed its acceptance of the professional as against the technological philosophy of medicine. Two of the important consequences which follow from this are pertinent to the training of medical students, in general, and in family and community problems in particular. The first is that 'his education can never be finished; his undergraduate days are merely a beginning, during which he learns how to study and how to keep himself abreast of the times.'[5] The second is that 'his duty is not bounded by the care of individual patients; he has duties to society, and when occasion demands he should lead public opinion on questions apt for one with his gifts, training and sympathies.' Medical education, despite its increasing materialism, has remained a preparation for a life dedicated to social service.[6]

Another important point to be considered is whether it may not be both desirable and possible that the basic curriculum be flexibly adapted to the capacities and interests of both the average and the more advanced student. Certain essential concepts, skills and experience must be acquired by all medical students. Other important aspects can be presented and demonstrated to the outstanding, receptive group which usually is found in every class of students. 'The training of medical students should be planned so that all of them reach a certain standard, and a proportion of them reach a more exacting one.'[7]

The enthusiastic and highly motivated student will undoubtedly on his own acquire more knowledge and experience. But it can be submitted that his teaching environment should consciously and purposefully organize these further opportunities for him. If the student is sufficiently and suitably stimulated

and encouraged there is a greater probability of his applying his concepts, perfecting his skills and learning from his experience in his practice.

COMMON CATEGORIES OF PROBLEMS

The problems will be those with which a practitioner is as frequently confronted as he is with disorders such as, for example, gastro-enteritis, pneumonia and salpingitis. These problems arise in the course of family and community living.

There are those concerned with procreation, e.g. infertility and spacing. Dysmenorrhoea, frigidity or impotence may be ways in which patients express their difficulties in accepting the adult, mature heterosexual role of a parent. Child rearing raises many problems, e.g. those associated with habit training such as sleep, feeding and toilet. Emotional difficulties in a child may be expressed through predominantly physical means such as asthma, gastro-intestinal upsets or through behaviour disturbances such as bed wetting or excessive crying.

During schooling certain difficulties may arise related to defects of hearing, vision or speech, or to poor school progress and achievement.

Associated with puberty and adolescence there may be problems of precocious or delayed physical maturation.

Many physical and emotional stresses in adult men and women relate to employment. Each individual's mode of expressing these stresses will usually have predominantly physical or emotional components.

The universal problem of alcoholism which frequently confronts practitioners usually has both its roots and its hope of treatment in the family and the community.

SOME BASIC CONCEPTS

The basic concepts, skills and experience which must be acquired by the medical student for his training in family and community problems can now be dealt with. The concepts can be considered under three broad headings—developmental, cultural and epidemiological.

1. *Developmental.* These will provide an understanding of normal development in all areas—physical, intellectual and emotional. The common major deviations in each of these areas will need to be discussed. The student must be guided to appreciate the implications for health of these deviations, not only to the affected individual, but also to his family and the community.

2. *Cultural.* The understanding an individual has of what constitutes health, the actions he performs in relation to his health, and finally his actual state of health are all related to the society in which he lives and the place he occupies in that society.[8] The student will need to appreciate the connexion between social and cultural conditions and states of health. This understanding is particularly important if the student will be learning and practising among a culture or sub-culture different from the one in which he himself was reared.

Individuals function in a social environment which affects, and is affected by, their state of health. This social environment consists of discrete, and yet interrelated, sectors such as the home, the neighbourhood, the school, the factory, the hospital and the community. Within each of these there occurs the transmission, not only of communicable disorders, but equally important, the transmission of communicable attitudes towards the prevention and treatment of disease and the achievement of health. It is in these situations that the totality of health behaviour, including that related to health and medical agencies and personnel, is determined.

3. *Epidemiological.* As he acquires this understanding of the nature and mode of action of the socio-economic determinants of disease, the student can be introduced to the concepts of epidemiology concerned with the study of populations and all cases that can be defined in them. Epidemiology deals with the health of the community and of sections of it, past and present. Clinical problems are set in community perspective.

The student must learn to appreciate the use of statistical methods for the study of groups and 'the interconnections between health and disease in the population on the one hand and biological, social and economic differentials on the other.'[9]

Epidemiology, by identifying harmful ways of living, points the road to healthier ways. As J. N. Morris says:

> 'One of the most urgent *social* needs of the day is to identify rules of healthy living that might reduce the burden of the metabolic, malignant and "degenerative" diseases which are so characteristic a feature of our society.'[10]

FORMULATION OF A DIAGNOSIS

A further step in the training of the student is the application of these developmental, cultural and epidemiological concepts. The student can be shown that the same principles of examination, diagnosis and treatment operate

in family and community problems as in the individual clinical case. The student can acquire the discipline of answering a sequence of questions, the answers to which will provide the basis for his diagnosis and treatment of the problem under review.

Firstly—what are the facts? Secondly—what do the facts mean? Are they favourable or promotive of health or stressful and deleterious? What can the affected individual, his family and community contribute to the solution of the problem? Finally, how can we use these facts to deal with the problem?

Requisite Skills. To be able to answer these questions the student will have to acquire certain skills. He will need to become adept in obtaining a full family biography including the marital and maternal history. He must be able to ask about income and expenditure. How to observe and infer relationships between people is another ability the student has to develop. Determining the part each individual plays in his family, other groups, and the community is yet another aspect. Finally, and perhaps the most important of all skills for the student to develop, is to be able to form such a relationship with people that they find it easy to express their own attitudes, anxieties and aspirations.

In the hierarchy of a hospital, the student with his lower status, is usually socially less distant from the patient than the tutor or chief. The relationship that can develop between a student or an intern and patient is usually less formal than that which develops between the patient and the senior physicians. In the more informal relationship the patients may find it easier to reveal their intimate, personal problems and to express their attitudes and anxieties. Often patients may hold back relevant material or suffer needless anxiety because they feel either that the senior physicians would regard them as foolish or that they are too busy to be bothered by such matters.

Common Necessary Procedures. A practitioner uses a number of procedures continually. These are not traditionally accorded the same attention as technical procedures such as auscultation and palpation, in which he is meticulously trained. As a consequence he is usually neither supervised, assessed nor assisted in perfecting these procedures of which a few examples will be discussed, viz. explanation, reassurance, support and referral.

The student must be able to explain to the patient, in simple terms, the etiology and natural history of his disorder and the objectives of the treatment. This implies a degree of sensitivity, heightened by the examples of his tutors, to the fears and anxieties of patients in the clinical situation. The attention of the student needs to be consciously directed to situations which tend to provoke anxiety and the iatrogenic components of such anxiety must be critically and honestly assessed.

In situations where fear and pain are unavoidable, reassurance is necessary but the student must also realize that in some cases this reassurance may have more effect on him than on the patient.[11] Particularly in the chronic and non-remediable case the capacity of the doctor and the student to give emotional support during the crisis of adaptation needs to be exercised.[12]

Referral of the patient to consultants, special hospitals or agencies may arouse his anxiety because of fear of the unknown or because of a degree of stigma associated with, e.g. psychiatric or social welfare referral. The student should gain experience in exploring the anxieties and attitudes of patients and in the ability to explain the purpose and nature of the agency to which the referral is to be made.

Introduction to Health and Welfare Personnel and Organizations. The final category of student experiences to be discussed are those concerned with his introduction to those resources which can supplement therapeutic, preventive and promotive medical measures. All students should understand the functions and potentialities of the nurse in the different spheres in which she may operate, viz. hospital and clinic, family and community, school and industry. The objectives and techniques of health educators and community organizers can be discussed and demonstrated. For selected students supervised experience such as an educational talk to a group of antenatal or obese women can be arranged. Depending on the agency concerned the students can be made aware of their existence and functions, observe their personnel at work or even work with them on supervised cases. These agencies would include, e.g. those dealing with the blind, deaf, crippled, or persons suffering from tuberculosis and alcoholism. The types of personnel would include social workers, child therapists, logopaedists, remedial educationists, welfare officers and marriage counsellors.

SUMMARY

The role of Medicine in society is expanding. Chronic disease and mental illness have emerged as the major health problems of the future. The concern of public health is now

more with the hazards of living than with the dangers of dying. The scope of the general practitioner in family and community problems has also extended.

The medical student needs to be prepared to detect and deal with family and community problems.

The common categories of these problems are outlined. Developmental, cultural and epidemiological concepts all contribute to the understanding of these problems. The student can be guided to the formulation of the diagnosis of a family or community problem.

The requisite skills for obtaining the data for this diagnosis are discussed and common procedures necessary in the handling of these cases are outlined.

The particular character of the student-patient relationship is looked at. Finally, reference is made to student experiences with other health and welfare personnel and agencies.

OPSOMMING

Die geneeskunde speel 'n steeds groter rol in die samelewing. Dit blyk dat chroniese kwale en sielsiektes die grootste gesondheidsprobleme van die toekoms gaan oplewer. Openbare gesondheid bemoei hom tans in 'n groter mate met die risiko's wat deur die lewe meegebring word as met die gevare van die dood. Die bestek van die algemene praktisyn se werk vir sover dit gesins- en gemeenskapsprobleme betref, het ook uitgebrei.

Dit is noodsaaklik dat die mediese student hom moet voorberei om gesins- en gemeenskapsprobleme te ontdek en te behandel. Die gewone klasse waarin hierdie probleme ressorteer, word kortliks beskryf. Ontwikkelings-, kulturele en epidemiologiese faktore dra almal by tot 'n beter begrip van hierdie probleme. Die formulering van die diagnose van 'n gesins- of gemeenskapsprobleem is 'n rigting waarin die student gelei kan word.

Die nodige vernuf vir die verkryging van die gegewens vir so 'n diagnose word bespreek, en 'n kort uiteensetting word verstrek van die gewone prosedures wat by die behandeling van sulke gevalle toegepas word.

Die besondere aard van die student-pasiënt-verhouding word in oënskou geneem. Ten slotte word daar verwys na studente-ondervindings met ander gesondheids- en welsynswerkers en agentskappe.

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THE CORTICAL LOCALIZATION OF LANGUAGE

THE METHOD OF INVESTIGATION

M. K. WRIGHT, M.SC., M.B., B.CH.
Johannesburg

Despite the research of Nielsen,[1] who had access to a wealth of clinical material, there are still some clinicians who believe that aphasia possesses little localizing value as a symptom. Naturally these clinicians dismiss attempts to classify dysphasias into several varieties as a more or less academic pastime. Nonetheless previous failures, apparent or real, to establish a localizing value for the dysphasias are inadequate reasons for assuming that such localizing value does not exist. It is also necessary to proffer valid reasons for assuming that 'local sign' is a highly improbable property of dysphasia. The few publications that attempt the latter, e.g. Weisenberg and MacBride,[2] merely beg the question.

The questions of dysphasia and specific cortical representation for language processes are likely to be complex since they still defy a generally accepted solution. However, there seems hope for a method which correlates EEG foci of abnormal activity with dysphasic components of focal seizures. In the vast majority of patients afflicted with a convulsive disorder there is localized brain damage of which the seizures are but symptomatic, the form of the seizure in any patient commonly depending upon the site of cerebral damage. In a surprisingly large number of focal seizure patterns there is a regularly repeated type of dysphasia occurring with each attack. Such dysphasias are, of course, only a part of a seizure, which

may be most diverse in other respects from patient to patient.*

The ictal dysphasia is transient though usually distinctive and fully developed. There is no permanent lesion in the speech areas (dysphasia arising from ictal spread from an epileptogenic lesion) introducing no complicating secondary factors. It recurs for further observation with each seizure. It is suggested that patients with ictal dysphasias provide a most reliable insight into the nature of speech disorders attendent upon organic, albeit temporary, neurological disturbance. About 100 such patients have been observed and the site from which the ictal episodes spread has been determined in each case by electroencephalography. (In some cases the ictal discharge has been localized at the time of the dysphasic defect).

PRELIMINARY PREMISES

Premise 1: The lack of an accepted and relevant analysis of language as an aspect of human behaviour and experience has necessarily caused a diversity in the classification, description and functional explanation of the origin of partial language defects produced by localized cerebral damage.

This premise contains a strong element of tautology within it, but it is important to make the tautology explicit since present analyses of language used *vis-à-vis* dysphasia are probably not at all satisfactory.

The argument that any particular classification of the dysphasias is based on an adequately instructed analysis of language can only be refuted by showing that the analysis in question is not likely to be adequate because it is not relevant. It is further suggested that 'relevance' can be equated with the notion 'useful for physiological investigation.' Thus an analysis of language must at least contain terms definable by direct observation or by logical deduction from direct observation: the formal statement of the analysis must have intrinsic logical cohesion. There remains the empirical test of whether there is enough useful correlation between the formal analysis and the processes of language revealed in normal and dysphasic subjects. The final empirical step determines the relevance of the analysis.

The division into 'sensory' and 'motor' dysphasia shows that the clinical neurologist has approached the problem of human speech via the spinal cord and brainstem. Unfortunately the terms 'sensory' and 'motor' possess but a fraction of their spinal usefulness for even the simplest problems of cortical neurophysiology. The terms 'receptive' and 'expressive' are mere synonyms for 'sensory' and 'motor,' while the descriptive terms 'nominal' and 'syntactic' are adjectives borrowed from the school-room study of grammar. No introspective or 'mentalistic' description of language is acceptable because it must lack definitions based upon impersonal observation and because it has not the peculiar authority, belonging to the introspective analysis of varieties of sensation, of incorporation within the everyday language of all people. The apparent insight, wisdom and complexity of mentalistic theories present very real dangers because they add plausibility with ease. Such fundamental differences of approach as those outlined above preclude a preliminary discussion of physiological mechanisms since the formulation of a problem in relation to specific available techniques cannot be done.

Two examples, one hypothetical and the other historical, derived from the neurological description of sensation, illustrate the fallacy in any clinical exposition of language defects which presupposes, erroneously, that an accepted analysis of language behaviour exists.

In the first place, imagine the incredible impasse that must occur should the ascending fibre tracts in the spinal cord have to be described without the analysis of sensation offered by the everyday words 'pain,' 'vibration,' 'touch,' etc. The outcome could only be an anatomical description of nerve processes on which much useless philosophical comment might well be raised. Confusion is averted merely because an analysis of sensation does exist and is relevant simply because it is incorporated in everyday language; one does not suppose that relevance is lost on the grounds that the whole human race is deluded.

Secondly, the introduction of the terms 'epicritic' and 'protopathic' had a deleterious effect on the physiological theories of sensation.[3] The two terms are based on evolutionary, and thus necessarily hypothetical, interpretations of the result of certain peripheral nerve lesions. They belong to abstract theory and not to impersonal observation or to everyday usage: they must stand or fall on an empirical test of their usefulness to neurophysiology and they were discarded because they were neither an adequate nor a relevant addition to the everyday analysis of sensation.

Premise 2: The analysis of the content, logical form and everyday use of language belongs to the

* Many patients are hesitant to ascribe dysphasic components to focal seizures lest it should be given misplaced psychiatric import or simply because they are unaware that their speech difficulty at such times is important. Tactful questioning generally reveals the facts. Dysphasia occurring as part of a focal seizure fulfils all the necessary conditions under which the term may be used meaningfully.[1]

field of modern logic which in its analysis of language behaviour attempts to be an objective discipline.[4, 5]

Possibly many neurologists and speech therapists have never considered the significance of a specific analysis of language as a separate field of investigation. Nonetheless there are several publications by competent logicians dealing with the latter topic only. Those of Morris,[4, 5] Carnap,[6—8] Bloomfield[9] and Langer[10] are particularly relevant to the present theme. Within their works exists a general agreement on the framework of the logical analysis of language, while the precision of development of their ideas shows convincingly that this field of logic is not one into which an amateur may stray without much purposeful effort. To quote one passage from Bloomfield:[9]

'The subject matter of linguistics, of course, is human speech. Other activities, such as writing, which serve as substitutes for speech, concern linguistics only in their semiotic aspect, as representations of phonemes or speech-forms. Since the meanings of speech cover everything (designata, including denotata; syntactic relations; pragmatic slants), linguistics, even more than other branches of science, depends for its range and accuracy upon the success of science as a whole. For the most part, our statements of meaning are makeshift. Even if this were not the case, linguistics would still study forms first and then look into the meanings, since language consists in the human response to the flow and variety of the world by simple sequences of a very few typical speech-sounds. . . .

Popularly and even, to a large extent, academically, we are not accustomed to observing language and its effects; these effects are generally explained instead by the postulation of "mental" factors.'

There has been no lack of effort on the part of logicians. Perhaps, therefore, one of the most significant statements in this article is that the author can find no reference to such work in clinical descriptions of speech defects and in teaching neurology to logopaedic students for several years none among the students had heard of the logicians quoted above.

Premise 3: A method of topographical diagnosis of pathology sufficiently precise to locate distinct regions of cortical abnormality within an area that only extends over about 8–14 square inches is probably required if spatial localization of cerebral damage causative of speech disturbance is to be contributory to the physiology of human language usage. Acute lesions or neoplasms, with attendant oedema, are of little value, especially if they occur in the relatively silent areas adjacent to the 'speech areas.'

It is suggested that the localization of a very small region of occasional spike discharge by electroencephalography, when the EEG abnormality lies either within or adjacent to the cortical regions generally associated with speech, provides a method of topographical diagnosis of sufficient precision to satisfy the requirement of this premise.

An Analysis of Language

The three latter premises give reason to the suggestion that an analysis of language processes (albeit simplified) should be borrowed from publications in modern logic, and aphasias known to occur as a consequence of brain damage should be defined anew such that each of the more common varieties shall, if it prove possible, represent a failure in a particular process of normal language behaviour.

The development of semiotic, the science of signs and languages, has been extended by Morris[4, 5] in both the vigorous manner of mathematical logic and in the empirical tradition of objective psychology. In the next paragraph some of the terms of semiotic are explained briefly, but no attempt has been made to follow the precision of definition that characterizes mathematical logic.

The description of language processes (i.e. semiosis) may be divided into the spheres of semantics, syntactics and pragmatics. Semantics deals with any empirical observation, or logical analysis, concerning the relationships (i.e. semantic relationships) existing between a linguistic expression and the object or event to which that expression refers. Syntactics is concerned with the relations (syntactic relations) between two or more of the numerous symbols within a language. Pragmatics describes relationships (pragmatic relations) between linguistic expressions and the overt behaviour of an individual, or individuals, who may utter or respond to the expressions.

It is submitted that these notions do not outrage common sense while they allow of the abstraction, within limits, of 'objects in the physical world,' 'words or other signs' and 'behaviour motivated by language.' The abstraction is made deliberately, and can be controlled; surely it is unreasonable to insist that the process of language must always be considered as a whole, for the number of variables concerned is so large that it is simply impossible to do so.

Classification of Partial Language Defects

Any description of a partial language defect in which specific reference can be confined to the relations between words and the objects to which they refer belongs to the field of descriptive semantics. Any description in which references can be confined to relations between linguistic expressions in the formulation of

sentences is a part of descriptive syntactics, while descriptions in which necessary reference must be made to the patient's response to words belong to descriptive pragmatics. It is therefore important to decide whether reference to the patient's response is incidental or not in any description of a partial language defect. The test situation should determine the decision. If, for example, an object is shown and the patient names it, then the fact that the name is pronounced by the patient could be noted by several independent individuals and could be described without reference to the patient. If, on the other hand, the patient's response to a written or spoken word is such that he apparently does not understand that word, then the defect can only be described by reference to the patient's behaviour.

It it submitted that the common tests for aphasia and verbal agnosias can be classified into three groups which test the integrity of semantic, syntactic and pragmatic relationships respectively. Further, the character of the test and the observed response can be formulated so that an objective description may be given of any defect that is revealed. Hence the terms semantic aphasia (or dysphasia), syntactic dysphasia and pragmatic dysphasia are suggested on the grounds that they are readily and rather precisely defined from the test situation and because they are derived from an adequate analysis of language. To the latter three types of dysphasia must be added another of very different nature, viz. apractic dysphasia (i.e. Broca's aphasia, motor aphasia) including the transcortical subdivision of apractic dysphasia due to subgriseal lesions in the region of the insula.

If the proposed classification of dysphasias is put to the final and most crucial test, it is credited by the fact that these types of speech defect, known by different terms, do in fact occur in clinical neurology. To take one other classification for comparison, semantic dysphasia is described by Nielsen[1] as amnesic dysphasia; syntactic dysphasia is equivalent to Nielsen's formulation dysphasia, while pragmatic dysphasia is equivalent to the latter author's semantic dysphasia.*

* The use of the word 'semantic' by Nielsen and his predecessors is unfortunate. It is derived from the older and wider sense of the word 'semantic' by which it included the whole of semiotic (i.e. it included semantics, syntactics and pragmatics). The case for replacing the term 'semantic dysphasia' by 'pragmatic dysphasia' rests on the more authoritative claim of the modern analysis of language and hence of meaning.

COMMENT

A method of investigating the problem of the cortical localization of language behaviour, using clinical case material, has been discussed and consists of three major principles.

The first is the use of a classification of partial language defects (dysphasias) based on the modern logical analysis of language behaviour. This classification is described at some length for it is submitted that it can impart some order into the chaos of the terminology of dysphasias.

The second principle lies in the use of dysphasic episodes of ictal origin for study.

The third principle is that the localization of cortical pathology responsible for the dysphasic episodes is achieved by electroencephalographic studies mainly.

A brief account of the results obtained by application of the method will be the subject of a further communication. It is felt, however, that the method itself raises points that may be of interest to others who encounter the problem of dysphasia in its various manifestations.

OPSOMMING

'n Metode om die probleem van die kortikale lokalisasie van taalgedrag te ondersoek deur gebruik te maak van materiaal wat deur kliniese gevalle opgelewer is, word bespreek; dit bestaan uit drie hoofbeginsels.

Die eerste is die gebruik van 'n klassifikasie van gedeeltelike taaldefekte (disfasies), gegrond op die moderne, logiese ontleding van taalgedrag.

Hierdie klassifikasie word taamlik breedvoerig bespreek, want daar word beweer dat dit 'n sekere mate van ordelikheid kan verleen aan die chaos wat deur die terminologie van spraakmoeilikhede geskep is.

Die tweede beginsel lê opgesluit in die gebruik van difasiese episodes van 'n iktale oorsprong vir bestuderingsdoeleindes.

Die derde beginsel is dat die lokalisasie van die kortikale patologie wat vir difasiese episodes verantwoordelik is, hoofsaaklik deur middel van elektroenkefalografiese studies bewerkstellig word.

'n Beknopte verslag oor die resultate wat met die toepassing van dié metode behaal is, sal die onderwerp van 'n verdere mededeling vorm. Daar word egter gemeen dat die metode self sekere punte te berde bring wat die belangstelling kan aanwakker van andere wat die probleem van spraakmoeilikheid in sy verskillende manifestasies teëkom.

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MEDICO-LEGAL SECTION

EX PARTE TOMICH*

NATAL PROVINCIAL DIVISION, 16 OCTOBER 1957

CALLING OF MEDICAL EVIDENCE

In an application for the appointment of *curator bonis* to a person detained in a mental hospital the affidavit of the medical witnesses and the report of the *curator ad litem* clearly showed that the patient was, and always would be, incapable of managing his affairs. Although the medical witnesses were in Court, they were not called to give evidence.

Held, that the order should be granted as prayed without oral evidence being heard.

Held, further, *per* BROOME, J.P., that, where the case was clear, in the order applying for the appointment of the *curator ad litem* there should always be a paragraph that the oral evidence of the medical witnesses should be dispensed with unless the *curator ad litem* should require, or the Court should direct, their attendance.

In an application for the appointment of a *curator bonis* to a person detained in a mental hospital, the affidavits of the medical witnesses and the report of the *curator ad litem* were in clear terms to the effect that the mental patient was, and always would be, incapable of managing his own affairs. The medical witnesses were present in Court and available to give evidence.

J. Allan Howard, for the applicant: The medical witnesses are present, but in view of the report of the *curator ad litem* and the affidavits of the medical witnesses, I do not intend to call them unless the Court wishes to hear them. I ask that a *curator bonis* be appointed in terms of the order prayed.

J. B. Talbot, as *curator ad litem*: I have nothing to add to my report.

The Court [BROOME, J.P., and KENNEDY, J.] granted the order as prayed, without hearing oral evidence of the medical witnesses.

Per BROOME, J.P.: We would prefer it if, in a clear case like this, there were always a paragraph in the first order prayed (for appointment of the *curator ad litem*) asking for the oral evidence of the medical witnesses to be dispensed with unless the *curator ad litem* should require, or the Court should direct, their attendance. I think this ought to be the practice in all clear cases in the future. The applicant ought to be able to judge from the affidavits of the medical witnesses and the circumstances of the case whether it is a clear case.

* Reproduced from the *South African Law Reports* [1957 (4) 667] by permission of the Editor and the publishers, Juta and Co., Ltd.

NOTES AND NEWS : BERIGTE

Dr. B. L. Gollach has commenced practice as a Specialist Physician at 25 Moray House, corner of Jeppe and Smal Streets, Johannesburg. (*Telephones*: *Residence*: 45-3033; *Rooms*: 23-7035).

* * *

Dr. Werner Weinberg, of Johannesburg, National Secretary of the International Fertility Association in South Africa, has been appointed Vice-President (*in absentia*) of Sectional Meeting C on *Female Sterility* by the Programme Committee of the Third World Congress on Fertility and Sterility to be held in Amsterdam, 7–13 June 1959.

* * *

PHENERGAN IN 1 C.C. (2.5%) AMPOULES

Maybaker (S.A.) (Pty.) Ltd. announce the introduction of a 1 c.c. ampoule containing a 2.5% solution of *Phenergan* brand promethazine hydrochloride. It will be found useful in anaesthetic premedication and for other indications where a smaller dose of the drug is required.

The product will be supplied in boxes of 10 x 1 c.c. ampoules.

* * *

FUNGIZONE

Establishment of emergency depots throughout the world to make available in emergencies a new antibiotic with demonstrated clinical efficacy in the therapy of a number of both superficial and systemic mycotic infections, has been announced by the Squibb International Division of Olin Mathieson Chemical Corporation.

Called *Fungizone* (generic term: amphotericin B), investigators report that this antibiotic has proved effective in the following systemic fungus diseases, several of which have, until the discovery of this preparation, been fatal: cryptococcosis (torulosis); coccidioidomycosis; histoplasmosis; South American and North American blastomycosis; aspergillosis; South American leishmaniasis; and disseminated moniliasis. Several physicians, it was noted, have also obtained beneficial results in using *Fungizone* for the treatment of cryptococcal meningitis.

Fungizone or amphotericin B is derived from a previously undescribed species of Streptomyces. This species of Streptomyces was isolated by the scientists of The Squibb Institute for Medical Research in New Brunswick (U.S.A.) from soil samples obtained from the banks of the Orinoco River in Venezuela.

According to clinicians using *Fungizone*, improvement ranging from fair to marked was noted in a significant number of patients. In some instances results were negative or therapy had to be discontinued because of toxic effects. Chills, fever, nausea and headaches were frequently observed side effects, it was reported, although these reactions were in some cases controlled or reduced by use of antipyretics or antihistaminics, by suspension of therepy, or reduction of dosage.

Fungizone is generally administered by intravenous infusion; other parenteral routes may also be used. *Fungizone* is available as a sterile powder, packaged in vials containing 50 mg. of amphotericin B activity, for reconstitution in dextrose solution. According to the manufacturer, saline solution should not be used.

In the Union of South Africa, emergency supplies are being stocked by all branches of Protea Pharmaceuticals, Limited.

SOCIETY FOR CLINICAL AND EXPERIMENTAL HYPNOSIS

At an inaugural meeting held on Friday, 20 March 1959, in Johannesburg, and attended by a representative section of the medical, dental and psychological professions, a local Society for Clinical and Experimental Hynosis was established.

The meeting was informed of the formation of a comparable group in Cape Town and of the events that had led up to the present interest among professional people in the clinical and scientific aspects of hypnosis. The meeting accepted as its main objectives the need to encourage co-operative relations among scientific disciplines with regard to professional research, discussion and publication of all the manifold aspects of hypnosis.

Dr. Geerling, a past-President of the Medical Association (Southern Transvaal branch) proposed the election of a Steering Committee comprising members of the Medical, Dental and Psychological Associations. The following members were elected:

Dr. B. W. Levinson (*Medical*);
Dr. S. Rootenberg (*Dental*);
Dr. C. F. Kruger (*Psychological*).

This committee was made responsible for drawing up a Constitution dealt with at the meeting held on 23 June.

For further information all correspondence should be addressed to:

The Honorary Secretary,
Society for Clinical and Experimental Hypnosis,
Department of Psychology,
Tara Neuro-psychiatric Hospital,
P.O. Box 13, Saxonwold, Johannesburg.

PREPARATIONS AND APPLIANCES

ALBAMYCIN-T FLAVOURED GRANULES

Upjohn announce the availability of *Albamycin*-T Flavoured Granules.

Composition: When water (50 c.c.) is added to fill the bottle and shaken until the suspension is uniform, each c.c. will contain novobiocin (as *Albamycin* Calcium) 62.5 mg., plus tetracycline base equivalent to tetracycline HCl 62.5 mgs.

Action and Uses: Indicated in the treatment of mixed infections and infections susceptible to therapy with *Albamycin*, Tetracycline or a combination of both. *Albamycin*-T offers a wider range of therapeutic activity than with either antibiotic alone; adds a new dimension to broad spectrum antibiotic therapy: Bactericidal depth. Clinical data reveals the advantages of *Albamycin*-T which may be summarized under four headings:

1. Intercepts the development of resistant organisms and super-infection.

2. Amplifies the action of tetracycline against those organisms that cause the majority of bacterial infections.

3. Eliminates already resistant organisms.

4. Supplies high blood levels necessary for rapid therapeutic effect.

Albamycin-T Flavoured Granules are ideally suited to paediatric use from the standpoint of stability, dosage flexibility, palatability and efficacy. It brings to bear against infection two of the most effective antibiotics against the two most frequently involved groups of bacteria—staphylococcus and streptococcus.

Dosage: The daily dose should be calculated at 0.6 c.c. to 1.0 c.c. of suspension per kilogram of body weight, in two divided doses:

4–10 kg. ... ... ½ to 1 teaspoonful daily.
10–20 kg. ... ... 1 to 2 teaspoonfuls daily.
20–60 kg. ... ... 2 to 6 teaspoonfuls daily.

The flavoured granules are now available in addition to *Albamycin*-T Tablets.

Further information and clinical references available from Tuco (Pty.) Limited, P.O. Box 7779, Johannesburg.

REVIEWS OF BOOKS

DISEASES OF THE VERTEBRAL COLUMN

Modern Trends in Diseases of the Vertebral Column. Edited by Reginald Nassim, B.M., F.R.C.P. and H. Jackson Burrows, M.D., F.R.A.C.S. 1959. (Pp. 292 + Index. With 172 Figs. 75s.). London: Butterworth & Co. (Publishers) Ltd.

The publication of this book is timeous. The various chapters are contributed by recognized authorities in their respective fields.

Anatomy and Development by R. Walmsley is excellently done.

Congenital Anomalies by R. I. Harris is similarly impressive. *Spondylolisthesis* is included in this chapter and it is pointed out that the condition is not congenital but developmental. The forward migration of the spondylolisthetic vertebra either before or after removal of the neural arch is not stressed. In view of the clinical as well as the medico-legal importance of such possible migration, a fuller discussion of this aspect would be welcomed in future editions.

The full discussion of the indications, contra-indications and merits of different forms of treatment is one of the soundest contributions to this problem yet published.

Structural Scoliosis is dealt with by J. I. P. James in authoritative manner.

The Degenerative Diseases are described meticulously by Douglas H. Collins. The difficult problem of osteoporosis is analysed and treatment indicated on rational lines.

Tuberculosis of the Spine is covered by J. A. Cholmeley in a few pages, probably because the disease is rapidly disappearing in England.

Although the technique of direct surgical attack on the bone lesions is mentioned in quoting Macrae and Wilkinson, this work being carried out in many remote and less developed parts of the world is not adequately evaluated.

Anterior approach to cervical, high dorsal and lumbar disease on the lines of the well-known work of Hodson, Cauchoix and others is omitted. In future editions this chapter is worthy of expansion in view of the fact that many orthopaedic surgeons in far-away countries will open this volume for guidance in this field.

F. Dudley Hart has summarized and set out in concise form the modern concept and treatment of *Spondylitis Ankylopoietica.*

Valentine Logue contributes a balanced discussion on *Cervical Spondylosis.* Anterior fusion is regarded as somewhat experimental and too early for evaluation.

The neat interlaminar removal of C5, 6 lateral prolapsed discs by Scaglietti in selected cases is not specifically mentioned.

Tumours of the Vertebral Column are clearly set out by H. A. Sissons, with a discussion of pathology, diagnosis and treatment.

L. S. Carstairs, in his chapter on *Radiology,* illustrates beautifully a large variety of conditions. Great stress is laid on the need for reduction of radiation hazards.

Tomography is barely mentioned. To those of us familiar with the work of Maurice Weinbren, this seems a remarkable omission. To surgeons, in particular, this chapter places radiology in excellent perspective.

L. Guttmann, in his contribution on the *Management of Spinal Cord Injuries,* expounds his well-known views. The inadequacies of internal fixation for fracture dislocation are stressed. Meticulous conservative care is emphasized in paraplegia. Routine laminectomy is condemned. Intermittent catheterization is advocated—the early stages with continuous catheter drainage later.

The necrosis of the urethra at the point of angulation of the catheter connected to a heavy tube is not specifically mentioned. Valuable advice on nutrition, care of the bladder and bowel, the sexual problem and intractable spasticity is offered.

The indications for intrathecal alcohol block are discussed.

Low Back Pain is well dealt with by P. H. Newman. Diagnosis, treatment and valuable hints in details of technique will make this a chapter to refer to frequently.

Functional Backache is discussed by William Tegner. Much common sense is condensed into a few pages.

Spinal Biopsy is assessed by Norman L. Higinbotham.

Altogether the co-authors are to be congratulated on producing a magnificiently illustrated, carefully planned book.

Although a fair number of references from non-British sources is quoted, one cannot resist the impression that the book could have been enriched by freer use of information from a wider field. The book is essentially orthodox, although the title led one to expect greater stress on the horizons of the subjects concerned.

Nevertheless, this volume may be regarded as essential in every medical library and on every orthopaedic surgeon's desk.

PAIN

Pain. By Harold G. Wolff, M.D. and Stewart Wolf, M.D. 2nd ed. 1958. (Pp. 112 + Index. With 20 Figs. 32s. 6d.). Oxford: Blackwell Scientific Publications.

This is a book for the post-graduate student and as such makes absorbing reading.

The different qualities of pain are analysed, and the pathways discussed.

The various associated phenomena such as hyperalgesia, tickle, pain thresholds and reactions to pain, etc. are also fully set out.

The volume is not intended as an aid to diagnosis, but explains many well-known pain syndromes met with in different diseases.

It includes a chapter on the treatment of pain by drugs which either raise the threshold to pain or modify the reaction to pain, as well the general principles of the surgical treatment of pain.

It also contains a chapter on the sympathetic innervation of the stomach and since this is sectioned in the so-called Kux operation, this book should be read by the protagonists as well as the antagonists of this operation.

THE HAND

Rehabilitation of the Hand. By C. B. Wynn Parry, *M.B.E.*, M.A., D.M., D.Phys.Med. 1959. (Pp. 273 + Index. With 101 Figs. 51s. 9d. Postage 2s. extra). London and Durban: Butterworth & Co. (Publishers) Ltd.

For the interested, this book provides a comprehensive and workmanlike consideration of everything relevant to hand surgery, hand anatomy, Workmen's Compensation injuries and the rehabilitation of the hand.

It is a book that any hand surgeon must have on his shelf for reference and information. It was written in the closest co-operation with, and enjoying the confidence of, the Royal Air Force Plastic Surgery Centre. Mr. G. Pulvertaft, F.R.C.S., read the manuscript most carefully and offered numerous criticisms of extreme value.

The experience is that gained at the Royal Air Force Medical Rehabilitation units, and the book is full of advice concerning remedial exercises and games. It goes into resettlement and national facilities, with specific resettlement of patients with hand difficulties.

The volume is a ' must ' for the hand surgeon.

RESPIRATORY VIRUS DISEASES

Expert Committee on Respiratory Virus Diseases: First Report. World Health Organization: Technical Report Series, 1959, No. 170, 3s. 6d. 60 pages. Pretoria: Van Schaik's Bookstore (Pty.) Ltd., P.O. Box 724.

A large proportion of the first *Report of the Expert Committee on Respiratory Virus Diseases* is devoted to a consideration of the 1957 pandemic of Asian influenza which, by virtue both of its intrinsic importance and of the amount of knowledge now available on influenza viruses in general, tended to claim more of the attention of the participants than the other virus diseases of the human respiratory tract. The Committee reviewed antigenic changes which have occurred among the influenza A viruses of human origin since the first virus was recovered and, taking into consideration the major changes observed, recommended the grouping of these viruses into 3 principal sub-groups or families:

A: Comprising those viruses predominant up to 1946;

A1: Comprising those strains which predominated from 1946 until the appearance of the Asian virus in 1957; and

A2: Which includes these new Asian viruses.

The possible mechanisms for antigenic variation among influenza viruses were discussed, and the significance of vaccination in the control of influenza was analysed. The role of certain animals as possible reservoirs for human influenza virus was considered in a joint session with the WHO/FAO Expert Committee on Zoonoses (Wld. Hlth. Org. Techn. Rep. Ser., 1959, **169**). The experience accumulated in many countries with the use of the 2 types of vaccine available (one inactivated and the other live) was discussed. The information presented to the Committee showed that a reduction in the incidence of the order of two thirds can be obtained with both vaccines. However, as experience with the live virus vaccine is largely limited to the observations of investigators in one country only (the USSR), further studies of this vaccine were recommended.

Vaccination of selected groups of populations was recommended as a public health measure in the face of an epidemic. The WHO influenza programme was reviewed and the importance of extending it to cover countries and territories not at present taking an active part in it was stressed. The Committee recommended also that whenever possible influenza centres should undertake the diagnosis of respiratory infections caused by adenoviruses. Much new information on these and other respiratory virus infections was reviewed. It was stressed that they constitute an important cause of morbidity in all countries, but it was also recognized that the viruses so far discovered apparently represent only a small proportion of the ' nuisance viruses ' confronting the world population.

Annexed to the *Report* are several notes on new technical developments in serology and diagnosis, including details of a complement-fixation test which presents many advantages over other tests in current use.

HEALTH STATISTICS INCLUDING CANCER DATA

Expert Committee on Health Statistics, Sixth Report Including Third Report of the Sub-Committee on Cancer Statistics. World Health Organization: Technical Report Series, 1959, No. 164; 43 pages. 1s. 9d. Pretoria: Van Schaik's Bookstore (Pty.) Ltd., P.O. Box 724.

With the publication of the *Sixth Report of the WHO Expert Committee on Health Statistics* a further step has been taken towards the establishment of a uniform terminology for morbidity statistics. Precise definitions are put forward for the terms ' incidence,' ' period prevalence,' and ' point prevalence,' and the various methods of computing duration of illness discussed. The application of these basic concepts (if necessary, in modified form) to several special fields of morbidity studies is then considered.

The *Report* also reviews the sections of the International Classification of Diseases most urgently in need of critical appraisal in preparation for the Eighth Revision and contains proposals for co-ordinating the studies being made in various countries. Futhermore, it stresses the value of regional meetings of health statisticians, outlining the subjects that might most usefully be discussed, and appraises the activities of national committees on vital and health statistics.

Another problem which receives attention is the selection of health indicators, especially with reference to the measurement of levels of living. The opinion is expressed that for international comparisons recourse must be had to the simultaneous use of several indicators of varying degrees of meaningfulness and availability.

There are 2 *Annexures* to the report, the first comprising a list of subjects envisaged for studies and publications on methods and procedures in health statistics. The second contains the *Third Report of the Sub-Committee on Cancer Statistics.* This *Report* is concerned mainly with methods for measuring the incidence and prevalence of cancer; the purposes and uses of cancer registration, with recommendations on starting and maintaining a register; epidemiological studies on cancer; and the statistical classification, nomenclature and clinical staging of cancer. There is also a brief discussion of studies which have been carried out to determine the reliability of cancer diagnoses on death certificates.

PLAGUE

Expert Committee on Plague: Third Report. World Health Organization: Technical Report Series, 1958, No. 165; 42 pages. 1s. 9d. Pretoria: Van Schaik's Bookstore (Pty.) Ltd., P.O. Box 724.

The present low incidence of plague does not afford any grounds for complacency, as the disease still constitutes a potential threat of no little magnitude. Those undertaking research on plague will find in the recently published *Third Report of the WHO Expert Committee on Plague* a concise summary of present knowledge on the epidemiology and control of the disease, as well as recommendations for co-ordinated research. Several recent findings with regard to plague vectors and their rodent hosts are reported, and the distribution of all rodents and lagomorpha (other than the commensal species of rats and mice) so far incriminated in the transmission of plague is shown in a comprehensive Table, which forms the first of a number of *Annexures* to the *Report*. The fleas harboured by the rodents included in this Table are listed in the second *Annexure*, while the remaining *Annexures* deal with methods recommended for the control of commensal rodents; a method for the control of plague vectors; the present extent of insecticide resistance in fleas; and organization and techniques for epidemiological surveys on wild-rodent plague.

The therapy of plague is not a primary concern of the *Report*, but it is pointed out that, although the antibiotics are of great value, the sulphonamides should not be disregarded. The value of vaccination against plague and of chemoprophylaxis is also briefly discussed. Seroprophylaxis is no longer recommended by the Committee.

VENEREAL DISEASE TREATMENT CENTRES

World Directory of Venereal Disease Treatment Centres at Ports. World Health Organization. 1958; 162 pages. 8s. 6d. Pretoria: Van Schaik's Bookstore (Pty.) Ltd., P.O. Box 724.

Under the slightly modified title of *World Directory of Venereal Disease Treatment Centres at Ports*, the World Health Organization has just published a new edition of the list of centres in ports throughout the world at which merchant seamen can obtain treatment for venereal disease. It is published in application of the provisions of the Brussels Agreement of 1924. Countries which are signatories to the Agreement undertake to provide merchant seamen and watermen suffering from venereal diseases with the necessary medical treatment and supplies, free of charge and without distinction of nationality. The same applies to hospital treatment, when it is considered necessary. A certain number of other countries not parties to the Agreement also make available all or part of the facilities provided under it, either free of charge or against partial or full payment by the shipping company, the shipping agent or the seaman himself.

The list is alphabetical, by country and by port, of the existing treatment centres with the following information for each: name and address; consultation days and hours; type of service provided; availability of hospital facilities; and whether treatment is free or not. The text of the Brussels Agreement is also given, together with a list of the countries which have adhered to it or which unofficially apply its provisions, and a facsimile of the personal treatment booklet which is delivered to each seaman and in which is entered all information on diagnosis and treatment.

This work, which has been compiled and brought up to date on the basis of information supplied by most of the countries concerned, is an example of international co-operation which has greatly facilitated the control of venereal diseases.

THE STATUS OF THE SPECIALIST

A SURVEY OF EXISTING LEGISLATION*

*Reprinted from Vol. 8, No. 4, of the *International Digest of Health Legislation; World Health Organization*, Geneva, 40 pp. 1s. 9d. Pretoria: Van Schaik's Bookstore (Pty.) Ltd., P.O. Box 724.

The delimiting of special branches in medicine towards the end of the last century was an important landmark in the history of medicine. Since then there has been a general and continuous trend towards specialization among medical practitioners.

An enquiry made in 1949 by the World Medical Association showed that only a few countries had standards for specialist training which had the force of law. Since the enquiry was made, 10 or more countries have enacted their first laws on specialization in medicine. The countries covered by the survey prepared by WHO can be broadly divided into 2 groups: 23 countries in which the training and practice of medical specialists is regulated by law and a second group in which it is regulated by the medical profession.

There is a great difference in the number of specialities officially recognized in the various countries. In some, only about 15—the so-called 'classic'—specialities are recognized; in others, in which the special branches of medicine are divided into main and subsidiary branches, 50 or more are recognized. The study also reveals great variation in the standards of the training of specialists: period of training, type of training, certification of specialists, etc.

Once a physician is recognized as a specialist, he is bound, as far as the protection of his designation and the practice of his profession is concerned, by the legislative provisions relating to the practice of medical specialities, which likewise differ from country to country.

The subject matter of the survey is arranged in 13 chapters dealing respectively with laws and regulations: definitions of specialist; specialities and period of training; training requirements; qualifying examinations; certification boards; concurrent practice of specialities; protection of title; refusal of certification or recognition and appeal procedure; registration of specialists; transitional provisions; conclusion.

This comparative study will be of considerable interest to the medical profession in South Africa, where the legal validity of our specialist apparatus was upset in our Courts and then re-established by Act of Parliament. There is undoubtedly still much misgiving in many quarters about the wisdom of our present legislation, and a strong feeling exists in favour of reverting to a system of consultants who will be recognized as experts by their colleagues—a system which would do much to rehabilitate the position of the general (family) practitioner.

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